

## **REMARKS**

Claims 1-102 are all the claims pending in the application. Claims 1, 23, 45, 62, 79, and 91 are the only independent claims.

Applicant notes with appreciation that the IDS papers have been signed and acknowledged by the Examiner in a previous Office Action.

Claims 1-102 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Hasebe (5,990,408). Applicant respectfully traverses these rejections, and requests reconsideration and allowance of the pending claims in view of the following arguments.

### **Figure Cover Sheet**

As a preliminary matter, should the Examiner deem the claims of the present application to be allowable, Applicant requests that Figures 51 and 59 be used for the cover sheet on the issued patent; if two Figures are not possible, Applicant requests that Figure 51 be used as the figure for the cover sheet on the issued patent. The Examiner is invited to telephone the undersigned to discuss alternative figures should it be necessary.

### **1. “Audio output signal”**

Claim 1 is directed toward a multi-channel signal processing system and recites “wherein each processor of said plurality of signal processors process a received incoming audio electrical signal to produce an audio output signal.” Applicant’s last response of January 28, 2008, included comments as to Hasebe’s failure to teach the claimed “audio output signal.”

Applicant’s position can be summarized as follows:

- Hasebe elements 12-14 produce control signals;
- Hasebe signal processing section 19 produces audio signals; and
- Since elements 12-14 produce control signals, such elements cannot therefore

teach the claimed “plurality of signal processor” feature of claim 1 since these processors “produce an audio signal.”

In response, the Examiner commented in the present Office Action as follows:

“The Applicant argues that there is no audio output. However, there is clearly audio output. As can be seen at element (20), the digital signal is converted into an analog signal for output.” (Office Action pg. 4).

Applicant makes two points with regard to the Examiner's comments. First, the Examiner misstates Applicant's position set forth in the last response. Applicant never argued that Hasebe has "no audio output." To the contrary, Applicant's position is that the alleged plurality of signal processors (Hasebe elements 12-16) do not each "produce an audio output signal," which is a required feature of claim 1.

The second point is the Examiner's comment with regard to a digital signal being converted into an analog signal at element 20. Claim 1 does not recite such a feature and the significance of the Examiner's comment is not understood. In addition, it now appears that the Examiner is relying upon a different portion (i.e., element 20) of Hasebe for support for the rejection. Such action constitutes a new ground of rejection, which is not necessitated by any claim amendments (claims have never been amended). So that the record is clear in view of a possible petition under 37 CFR 1.181, the Examiner is requested to confirm that the present rejection now relies on element 20 as support for the rejection to claim 1.

## **2. Clarification requested: control signals vs. audio signals**

Applicant further asked the Examiner to clarify his position with regard to the control signals of the Hasebe patent. In particular, Applicant asked whether it was the Examiner's position that control signals are equivalent to audio signals? This point of contention has been raised in this application, as well as many others by Applicant and which are currently being examined by the present Examiner. Applicant seeks to resolve this issue, and has attempted to do so on many occasions during prosecution of related applications. Independent of the Examiner response to the topic of this request, the Examiner's position is not entirely understood. For instance, the Examiner's reply to the above-stated questions is as follows:

"The applicant argues the understanding of control and audio signals. Clearly there is audio input and audio output. Control signals are directly related to audio signals in that the control signal is used to change, control, or output audio signal. What would be the purpose of a musical device that did not output audio or sound or a means to produce sound" (Office Action pg. 4).

First, the Examiner commented that the reference has audio input and audio output. This is immaterial to the question posed. Second, the Examiner remarked about how controls signals

are related to audio signals, and then provided an example. However, the Examiner's has not addressed Applicant's question. Once again: Is it the Examiner's position that control signals are equivalent to audio signals? In other words, is a control signal the same as an audio signal?

For the record, Applicant's does not make this request as a mere exercise for the Examiner. This request is made in order to resolve a long-standing point of dispute between Applicant's understanding of the meaning of control and audio signals, and the Examiner's (apparent) meaning of these same terms. Whatever the Examiner's response is here, that answer encounters further difficulties within Hasebe as explained in Section 5 below.

As it applies to the present case, Applicant's position is that elements 12-14 provide control signals, and thus, cannot teach the claimed "audio output signal" as alleged by the Examiner. If the Examiner recognizes that control and audio signals are different, then the rejection cannot stand for the just-stated reason that elements 12-14 do not provide an audio output signal. On the other hand, if the Examiner alleges that these signals are the same, then Applicant is prepared to submit documentation that such a position is clearly erroneous to one of ordinary skill in this art field.

### **3. "Variably changing"**

Claim 1 also recites "wherein said processing of said received incoming audio electrical signal is performed by variably changing one or more signal attributes of said received incoming audio electrical signal." Recall that page 2 of the Office Action relies upon detection sections 12-14 of Hasebe as teaching the claimed "processing."

Applicant's position is that Hasebe reveals nothing with regard to the detection sections 12-14 providing anything relating to the identified "variably changing." Applicant assumes, for the sake of argument that the detection sections 12-14 change one or more signal attributes of a received incoming audio signal. Even if true, Hasebe provides nothing about "variably changing." Moreover, Applicant explained that the previous Office Action was silent as to the particular portion of the Hasebe patent which purportedly provides this feature.

Applicant further requested that the Examiner specifically identify the portion of Hasebe relied upon to support the rejection. The Examiner responded as follows:

“The applicant also argues the feature of variably changing attributes. The elements (12-15) use to detect and provide data which causes changes to the tone data via element (16), wherein variables changes are made based on the detections and corrections of the detections. Therefore, the limitation is met. What would be the purpose of detecting attributes, if no changes are going to be made to the attributes? The answer provides the claim limitation, wherein the changes are provided based on the detections.” (Office Action pg. 4, errors in original) (emphasis added).

As a first point, Applicant has carefully reviewed Hasebe and is unable to identify any location which provides “corrections of detections.” In other words, the entire basis of support for the Examiner’s rejection is a phrase which Applicant cannot find in the cited reference and for which the Examiner fails to identify the location in Hasebe. Accordingly, Applicant requests that the Examiner identify the particular portion of Hasebe to which the Examiner relies upon for this “corrections of detections” phrase. Absent such a showing, the rejection is clearly improper and should be withdrawn.

Second, Hasebe describes independent determinations of pitch based on signals from each of two pickup transducers, as well as the selection of a favored one of the determinations when the two determinations provide different values, or the average of these determinations. (Hasebe col. 11, lines 48-57). Even more relevant is that the Examiner fails to show how the Hasebe elements 12-15 variably change one or more signal attributes, such as pitch, timbre, or timing. This is another clear distinction of this claim over the Hasebe reference.

#### **4. Examiner fails to address Applicant’s arguments**

Applicant’s last response provided additional comments relating to the Hasebe patent. In particular, Applicant’s provided comments relating to the claimed “output signal interface” as set out on page 5 of the response. In the present Office Action the Examiner maintains the rejection with regard to this claim element without providing any substantive comments with regard to the points raised by Applicant. Applicant once again requests that the Examiner consider and address Applicant’s position with regard to the “output signal interface” position in a manner consistent with MPEP § 707.07(f), which provides:

“In order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner must provide clear explanations of all actions taken

by the examiner during prosecution of an application.

Where the requirements are traversed, or suspension thereof requested, the examiner should make proper reference thereto in his or her action on the amendment.

Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." (emphasis added).

For the convenience of the Examiner, Applicant reproduces below in Point 5 the substantive portions of the previously submitted arguments.

#### **5. "Output signal interface"**

Claim 1 further recites "an output signal interface for providing said audio output signal for each of said plurality of signal processors." A quick glance at the asserted Fig. 3 of Hasebe reveals a clear distinction between Hasebe and claim 1.

The Office Action indicated that output terminal 23 of Hasebe teaches the claimed "output signal interface." Recall that the signal at issue is the audio output signal which, according to the Office Action, is provided by the output of the envelope and pitch detection sections 12-14. For the moment, Applicant assumes *arguendo* that sections 12-14 do provide the claimed "audio output signal."

The question then raised is how can output terminal 23 provide the audio output signal from sections 12-14 when such components are separated by other components (e.g., control section 16, tone generation section 17, signal processing section 19, MIDI converter section 18, and several others) which do not permit the so called audio output signal to reach the output terminal 23. The correct answer is that it does not. The output from sections 12-14 never even remotely reaches output terminal 23, and thus, output terminal 23 cannot provide such output for each of the sections 12-14.

In view of the foregoing, Hasebe fails to teach or suggest a number of features recited in claim 1, and therefore this claim is believed to be patentable. Independent claims 23, 45, 62, 79, and 91 include language similar to that of claim 1, and thus, are each believed to be patentable for reasons similar to those discussed with regard to claim 1. The pending dependent claims are believed to be patentable at least by virtue of their respective dependence on the patentable independent claims.

**6. Distinctions with regard to various dependent claims**

Notwithstanding the foregoing, Applicant provides the following additional comments with regard to the dependent claims.

Regarding dependent claims 3, 25, 56, 57, 64, 73, 74, 81, and 93, such claims require pre-programmed processing instructions. Applicant finds that the cited portion of Hasebe (col. 5 lines 46-56) instead relates to signal acquisition and routing and has nothing to do with the claimed element.

Regarding dependent claims 4, 26, 47, 48, 52, 65, 82, and 94, such claims require pre-programmed mixing instructions. The Examiner relies upon Hasebe element 16 for such teaching. The only relevant commentary by Hasebe is found in column 6 lines 57-65 and column 7 lines 26-30 and 51-52. However, there is nothing in these passages that even remotely relate to the claimed feature.

Regarding dependent claims 6, 28, 83, and 95, such claims require modulating a signal amplitude. The Examiner cites to Hasebe column 4 lines 22-29, which Applicant finds as relating to picking a position based on phase difference of signals from the first and second pickup. This has nothing to do with the claimed element; there is no modulation taught, and phase difference and amplitude are simply not the same thing as is clear to one in the art of basic physics or engineering. There is nothing in this teaching that has anything to do with the claimed material.

Regarding dependent claims 9 and 31, such claims require signal processors that dynamically modulate timbre. The cited Hasebe Figure 3 discloses nothing in this regard.

Regarding dependent claims 10 and 32, such claims require signal processors that dynamically modulate pitch. The cited Hasebe Figure 3 discloses nothing in this regard.

Regarding dependent claims 11 and 33, such claims require signal processors that dynamically modulate timing. The cited Hasebe Figure 3 discloses nothing in this regard.

Regarding dependent claims 12-16, 34-38, 52, 69, 86-90, and 98-102, such claims require a controllable output mixer mixing according to pre-programmed mixing instructions. Applicant is unable to find any relevant discussion relating to the cited element 16.

**7. Examiner fails to address various dependent claims**

Applicant's review of the Office Action finds that support for the rejection to a number of dependent claims is missing from the Action. Specifically, the Examiner fails to set out support for the rejection to the following claims:

5 and 27	53 and 70
17, 39, 61, and 78	55 and 72
20 and 42	59 and 76
22 and 44	60 and 77
46 and 63	
49 and 66	

In the event the rejection is maintained, the Examiner is requested to identify in a non-final Office Action the particular portion of the cited reference relied upon, and in a manner consistent with MPEP 707. As the rejection currently stands, Applicant has not been informed of the position of the Examiner, and thus is prevented a full and fair opportunity to respond.

**CONCLUSION**

In view of the above, Applicant submits that the currently pending claims are in condition for allowance. However, should there remain any outstanding issues, it is respectfully requested that the Examiner telephone the undersigned so that such issues may be resolved as expeditiously as possible.

The Commissioner is hereby authorized to charge any additional fees which may be required in this application to deposit account No. 06-1135.

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Respectfully submitted,  
  
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